Salton Sea Ecosystem Restoration: Monitoring and Assessment Plan (MAP) and Focused Studies for Phase 1

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Overarching Goal of the Monitoring and Assessment Plan (MAP)

- Implement a data collection, analysis, management, and reporting system to inform and guide management actions for the restoration of the Salton Sea ecosystem.

Objectives of the Monitoring and Assessment Plan (MAP)

- Conduct a retrospective analysis of data to determine relevance and/or applicability for inclusion in the MAP.
- Incorporate relevant existing data in the MAP.
- Measure and assess changes to the Salton Sea ecosystem from baseline or other reference conditions.
- Provide information to refine hypotheses of ecosystem functions.
- Provide information to assess performance of project implementation and management actions.
- Store, manage, and facilitate public access to data.

Ecosystem Components to be Monitored in Support of Ecosystem Restoration

- Geographic/Geologic
- Hydrologic – surface water, ground water, water quality, and contaminants
- Biologic – plankton, benthos/aquatic invertebrates, fish, birds
- Air quality
- Episodic and unpredictable events

Air Quality Sections of the MAP

- Problem Statement
- Goal
- Objectives
- Constraints/Assumptions
- Key Questions
- Approach
- Conceptual Model

Air Quality Sections of the MAP Problem Statement:

Additional information is needed to:

- Characterize baseline (current) air quality conditions at the Salton Sea.
- Support estimation of future conditions.
- Better understand relationships among emission sources, pollutants, meteorological parameters, and other causes of variability in air quality.

Baseline Air Quality Monitoring Plan

- Six locations at the Salton Sea
  - Baseline ambient air quality
    - Particulate matter (dust)
    - Ozone
    - NOx
    - SOx
    - Hydrogen sulfide
    - Ammonia
  - Surface meteorological conditions

Next Steps

- Finalization of air quality MAPsections
- Identify roles and responsibilities
- Facilitate and integrate input from local, Tribal, state, and federal agencies and other stakeholders (Technical Working Group)
- Meetings and decision making
- Agreements and contracts to purchase equipment and implement monitoring
- Focused studies
- What else???

Focused Studies

- Characterization of the seasonal variability in playa conditions, which may include but is not limited to:
  - Refinement of threshold wind velocities,
  - Assessment of groundwater interaction and associated impact on playa conditions,
  - Sand surveys, and
  - Remote sensing.

Focused Studies, continued

- Characterization of the composition and quantity of fugitive dust emissions, which may include but is not limited to
  - Analysis of bulk playa grab samples,
  - Analysis of airborne playa emissions,
  - Assessment of particulate deposition, and
  - Completion of a back trajectory analysis.

Focused Studies, continued

- Identification of an equivalentBest Available Control Measures (BACM) for fugitive dust emissions, which may included but is not limited to:
  - Development and evaluation of a "Toolbox" of potential dust control measures, and
  - Completion of pilot tests for selected dust control methods
  - Consideration of commercial scale studies of promising methods, with monitoring and documentation of results

Focused Studies, continued

- Conduct investigations of potential odorous emissions from the Salton Sea (links to water quality)
- Conduct investigations of GHG emissions from proposed actions, and potential impacts on global climate change
- Conduct investigations of existing microclimate conditions at the Salton Sea